



## PATENT ABSTRACTS OF JAPAN

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G21C 17/00**(21) Application number: **57057924**(71) Applicant: **TOSHIBA CORP**(22) Date of filing: **07.04.82**(72) Inventor: **OKADA SATOSHI**(54) **ULTRASONIC PENETRATING DEVICE**

display circuit 118.

(57) Abstract:

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**PURPOSE:** To allow a transducer having a wide beam to detect the presence of a small obstruct by a method wherein a reflected wave is sent to an image processing circuit through a gate circuit being opened depending on the time corresponding to the position of the transducer.

**CONSTITUTION:** A transducer position-gate time converter circuit 119 sends a gate time signal corresponding to the rotated position of an ultrasonic transducer 109 to a timing circuit 120. On the other hand, ultrasonic beams from the ultrasonic transducer 109 are made to reach an ultrasonic reflector 110 passing above a furnace core 102 before being reflected by each of the small reflectors 110AW110G with a time lag. The reflected waves together with the output of a position detection circuit 112 are inputted to an image processing circuit 117 through the ultrasonic transducer 109 a receiver 114, a gate circuit 115 being opened specified time later than excitation, and a peak detection circuit 116. The penetrated image in the core gap between the ultrasonic transducer 109 and the ultrasonic reflector 110 is displayed in an image

